

LIST OF CLAIMS

Claim 1. (Currently Amended) A soluble complex comprising a magnesium dihalide and an electron donor represented by the following formula (I) expressing the molar ratio between the magnesium dihalide and the electron donor:



wherein  $\text{MgX}_2$  is the magnesium dihalide and  $\text{R}(\text{OR}')_n$  is the electron donor, X is a halogen, R is an n-valent  $\text{C}_1\text{-C}_{20}$  aliphatic group, an n-valent  $\text{C}_7\text{-C}_{27}$  araliphatic group or an n-valent  $\text{C}_2\text{-C}_{22}$  acyclic group,  $\text{R}^\pm$  R' is a  $\text{C}_1\text{-C}_{20}$  alkyl group or a  $\text{C}_7\text{-C}_{27}$  aralkyl group, n is a number from 1 to 6 and m is defined as a number  $0.5 \leq m \leq 2.0$ .

Claim 2. (Previously Presented) The complex according to claim 1, wherein X is selected from the group consisting of Cl, Br and I.

Claim 3. (Previously Presented) The complex according to claim 1, wherein R is an n-valent  $\text{C}_2\text{-C}_{22}$  acyclic group.

Claim 4. (Previously Presented) The complex according to claim 1, wherein R' is a  $\text{C}_6\text{-C}_{16}$  alkyl group.

Claim 5. (Previously Presented) The complex according to claim 1, wherein n is 1 to 4.

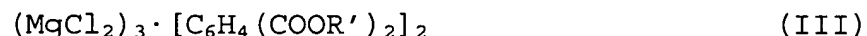
Claim 6. (Previously Presented) The complex according to claim 1, wherein m is 0.67 to 1.0

Claim 7. (Previously Presented) The complex according to claim 1, wherein Formula I is replaced with a magnesium dichloride phthalic acid ester complex having the formula (II):



wherein R' is the same as in claim 1.

Claim 8. (Previously Presented) The complex according to claim 1, wherein formula I is replaced with a magnesium dichloride phthalic acid ester complex having the formula (III):



wherein R' is the same as in claim 1.

Claim 9. (Previously Presented) The complex according to claim 1, wherein the complex has an X-ray diffraction pattern having a dominant peak at  $4.5^\circ 2\theta$ .

Claim 10. (Currently Amended) A process for the preparation of a complex according to claim 1, comprising reacting in solution a magnesium compound (a) containing an alkoxy moiety, which magnesium compound is selected from the group consisting of a complex of a magnesium dihalide and a magnesium dialkoxide, a complex of a magnesium dihalide and an alcohol, and a non-complex magnesium dialkoxide, with a halogen compound (b), which is capable of forming the electron donor by replacement of its halogen by said alkoxy moiety.

Claim 11. (Previously Presented) The process according to claim 10, wherein said halogen compound (b) is represented by the formula (IV):



wherein R is an n-valent C<sub>1</sub>-C<sub>20</sub> aliphatic group, an n-valent C<sub>7</sub>-C<sub>27</sub> araliphatic group or an n-valent C<sub>2</sub>-C<sub>22</sub> acyclic group, X is a halogen and n is 1 to 6.

Claim 12. (Previously Presented) The process according to claim 11, wherein R is an n-valent C<sub>2</sub>-C<sub>22</sub> acyclic group.

Claim 13. (Previously Presented) The process according to claim 11, wherein X is selected from the group consisting of Cl, Br and I.

Claim 14. (Previously Presented) The process according to claim 11, wherein n is 1 to 4.

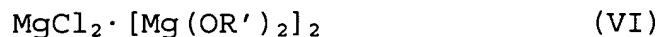
Claim 15. (Previously Presented) The process according to claim 11, wherein said halogen compound is an organic acid halide.

Claim 16. (Previously Presented) The process according to claim 10, wherein said complex of a magnesium dihalide and said magnesium dialkoxide are each a magnesium dichloride-magnesium dialkoxide complex of the formula (V):



wherein R' is a C<sub>1</sub>-C<sub>20</sub> alkyl group or a C<sub>7</sub>-C<sub>27</sub> aralkyl group, and p is 1 to 6.

Claim 17. (Previously Presented) The process according to claim 16, wherein formula (V) is replaced with formula (VI):



wherein R' is a C<sub>1</sub>-C<sub>20</sub> alkyl group or a C<sub>7</sub>-C<sub>27</sub> aralkyl group.

Claim 18. (Previously Presented) The process according to claim 16, wherein said magnesium dichloride magnesium dialkoxide complex is prepared by reacting magnesium dichloride with an alcohol into an intermediate which is a magnesium dichloride alcohol complex  $\text{MgCl}_2 \cdot (\text{R}'\text{OH})_{2p}$ , wherein  $\text{R}'$  is the same as in claim 16, and reacting the magnesium dichloride alcohol complex with  $p$  mol of a magnesium dialkyl  $\text{MgR}''_2$ , wherein  $\text{R}''$  is a hydrocarbyl group having 1 to 20 carbon atoms.

Claim 19. (Previously Presented) The process according to claim 18, wherein independently, the molar ratio  $\text{MgCl}_2:\text{R}'\text{OH}$  is between 1:1 and 1:8, the molar ratio  $\text{MgCl}_2 \cdot (\text{R}'\text{OH})_{2p}:\text{MgR}''_2$  is between 1:1 and 1:4, the temperature is between 80 °C and 160 °C, and the reaction time is about 2 h to about 8 h.

Claim 20. (Previously Presented) The process according to claim 15, wherein said magnesium compound (a) is reacted with said halogen compound (b), wherein compound (b) is phthalic acid dichloride  $\text{Ph}(\text{COCl})_2$ , wherein  $\text{Ph}$  is o-phenylene, and compound (a) is magnesium dichloride-dimagnesium dialkoxide complex  $\text{MgCl}_2 \cdot [\text{Mg}(\text{OR}')_2]_2$ , wherein  $\text{R}'$  is a  $\text{C}_6\text{-C}_{16}$  alkyl group.

Claim 21. (Previously Presented) The process according to claim 10, wherein said non-complex magnesium dialkoxide has the formula (VII):



wherein R' is a C<sub>1</sub>-C<sub>20</sub> alkyl group or a C<sub>7</sub>-C<sub>27</sub> aralkyl group.

Claim 22. (Previously Presented) The process according to claim 21, wherein said non-complex magnesium dialkoxide is prepared by reacting a magnesium dialkyl represented by the formula  $\text{MgR}''_2$ , wherein R'' is a hydrocarbyl group having 1 to 20 carbon atoms, with an alcohol represented by the formula R'OH wherein R' is the same as in claim 21.

Claim 23. (Previously Presented) The process according to claim 15, wherein said magnesium compound (a) which is a non-complex magnesium dialkoxide represented by the formula  $\text{Mg}(\text{OR}')_2$ , wherein R' is a C<sub>1</sub>-C<sub>20</sub> alkyl or a C<sub>7</sub>-C<sub>27</sub> aralkyl is reacted with said halogen compound (b) which is a phthalic acid dichloride  $\text{Ph}(\text{COCl})_2$ , wherein Ph is o-phenylene.

Claim 24. (Previously Presented) The process according to claim 10, wherein said complex of a magnesium dihalide and a

magnesium dialkoxide is a complex of a magnesium dichloride and an alcohol having the formula (VIII):



wherein R' is a C<sub>1</sub>-C<sub>20</sub> alkyl or a C<sub>7</sub>-C<sub>27</sub> aralkyl group, and q is from 1 to 6.

Claim 25. (Previously Presented) The process according to claim 24, wherein said complex of a magnesium dihalide and an alcohol is prepared by reacting magnesium dichloride MgCl<sub>2</sub> and an alcohol R'OH, wherein R' is the same as in claim 24.

Claim 26. (Previously Presented) The process according to claim 24, wherein the reaction temperature is kept between 10 °C and 100 °C, and the reaction time is about from 10 to about 90 min.

Claim 27. (Previously Presented) The process according to claim 15, wherein said magnesium compound (a), which is said complex of a magnesium dihalide and an alcohol having the formula MgCl<sub>2</sub>·(R'OH)<sub>q</sub>, wherein R' is a C<sub>1</sub>-C<sub>20</sub> alkyl or a C<sub>7</sub>-C<sub>27</sub> aralkyl and q is from 1 to 6, is reacted with said halogen compound (b) which is said phthalic acid dichloride Ph(COCl)<sub>2</sub>, wherein Ph is o-phenylene.

Claim 28. (Previously Presented) The process according to claim 10, wherein said magnesium compound (a) and said halogen compound (b) are reacted stoichiometrically.